

CLAIMS

1. A method for manufacturing a honeycomb structure comprising a step of processing a peripheral portion of a crude honeycomb structure to obtain a honeycomb structure with a
5 predetermined shape,

characterized in that the step of processing a peripheral portion of a crude honeycomb structure is made by a cutter having linear cut-off device.

2. The method for manufacturing a honeycomb structure
10 according to claim 1, wherein the cutter is a bead saw having a linear cutter as the linear cutting device comprising a linear body and any of diamond abrasive grain, general grind stone and multi-blade cutter disposed on the linear body.

3. The method for manufacturing a honeycomb structure
15 according to claim 1 or 2, wherein the method comprising steps of:

forming honeycomb segments having cells disposed parallel to a central axis of the honeycomb segment, each cell being surrounded by porous partition walls functioning as
20 filters, and each cell functioning as a fluid passage;

combining the honeycomb segments to form the crude honeycomb structure; and

processing the crude honeycomb structure by the bead saw to obtain a honeycomb structure with a predetermined shape.

25 4. The method for manufacturing a honeycomb structure according to claim 1 or 2, wherein the method comprising steps of:

forming honeycomb segments having cells disposed parallel to a central axis of the honeycomb segment, each cell being surrounded by porous partition walls functioning as filters, and each cell functioning as a fluid passage;

5 combining the honeycomb segments to form the crude honeycomb structure;

roughly processing the crude honeycomb structure by the bead saw to obtain a roughly processed honeycomb structure with a predetermined shape; and

10 finishing the roughly processed honeycomb structure to obtain the honeycomb structure with a predetermined shape.

5. The method for manufacturing a honeycomb structure according to any of claims 2 to 4, wherein the step of processing the peripheral portion of the crude honeycomb structure is made by rotating the crude honeycomb structure about a central axis thereof, causing the linear cutter of the bead saw to travel in a direction of the central axis, and pressing the linear cutter against the crude honeycomb structure from a side face thereof.

20 6. The method for manufacturing a honeycomb structure according to claim 5, wherein the step of processing the peripheral portion of the crude honeycomb structure is made by one continuous operation after the linear cutter is pressed against the crude honeycomb structure from the side face thereof.

25 7. The method for manufacturing a honeycomb structure according to any of claims 1 to 6, wherein the peripheral portion

of the crude honeycomb structure is processed such that a sectional shape of the crude honeycomb structure is formed in a round shape, an oval shape, an elliptical shape, a triangular shape, a polygonal shape, or an irregular shape when it is cut
5 off along a plane perpendicular to the central axis thereof.